UNIT 4 • EXTENDING THE NUMBER SYSTEM
Lesson 2: Operating with Polynomials

Practice 4.2.2: Multiplying Polynomials

Find each product.

1. $(x + 10)(x - 7)$

2. $(3x + 5)(x^3 + 4x)$

3. $(2x + 1)(x^4 - 6x + 3)$

4. $(x^5 - 2)(x^2 + 2x + 4)$

5. $(2x^2 + x - 6)(10x + 4)$

6. $(-x^3 - x^2 + 2)(x^3 + 3x^2 + 2)$

The area of a rectangle is found using the formula area = lw, where l is the length of the rectangle and w is the width. Find the area of each rectangle with the given lengths and widths.

7. $l = x + 14; w = 3x + 1$

8. $l = x^2 - 8; w = -x + 12$

9. $l = x^2 - 4; w = 5x + 10$

10. $l = 4x^2 + 8; w = 2x^2 - 3$